Table 1:EGU NOX Control Costs

Scenario #1: Emissions averaging within utility system. Baseline emission rates and heat inputs-----utilities data: SCR eff.---(80%) : SNCR eff.---- (30%): SCR & SNCR costs based on input from utilities and published data.

Utility	AEP	Cinergy	Hoosier Energy	IPL	IKECK	NIPSCO	Richmond Power & Light	SIGECO	Southern Company	Totals
Baseline emissions (tons)	28,731	40,198	9,508	18,221	20,253	22,903	754	11,172	4,679	156,419
Allowances	8,651	12,357	3,186	5,728	3,042	6,594	256	2,994	830	43,638
Emissions reductions needed (tons)	20,080	27,841	6,322	12,493	17,211	16,309	498	8,178	3,849	112,781
Emission reductions achieved (tons)	20,255	28,098	6,464	12,681	17,221	16,410	603	8,200	3,744	113,676
Control strategy:	SCR on U4, MB2, MB1: SNCR on U1, U3	SCR &combustion optimization on Cayuga units 1,2; Gibson units 1,2,3,4,5; Wabash River 6: SNCR and combustion optimization on Gallaghar units 1,2,3,4; Wabash River units 1,2,3,4,5	hi-perf SCR on Merom units 1SG1 &2SG1; combustion modification on Ratts units 1SG1 and 2SG1	SCR on Petersburg units 2,3,4; Stout unit 70: SNCR on Petersburg unit 1	85% SCR on all units	SCR on Bailly 7,8, Michigan City 12; Schahfer 14, 17, 18: SNCR on Mitchell 6,11, Schahfer 15	SCR on units 1&2	SCR on Warrick 67054, Culley 10123, Brown 61371, 61372	SCR on units 3&4. Additional 105 tons emissions reductions needed.	
SCR	3	8	2	4	6	6	2	4	2	37
SNCR	2	9		1		3				15
Total capital cost (million$)	307	474	82	210	116	208	14	111	61	1,581
Total ozone season cost (million $)	67.10	81.00	12.60	34.01	21.60	32.51	2.07	17.35	9.71	277.95
Cost effectiveness ($/ton)	3,313	2,883	1,949	2,682	1,254	1,981	3,433	2,116	2,593	2,445

Scenario #2: Emissions trading among utilities and non-EGUs in Indiana. Baseline emission rates and heat inputs-----utilities data: SCR eff.---(80%) : SNCR eff.---- (30%): SCR & SNCR costs based on input from utilities and published data.

Utility	AEP	Cinergy	Hoosier Energy	IPL	IKECK	NIPSCO	Richmond Power & Light	SIGECO	Southern Company	Totals
Emission trading action & control strategy	sell 175 allowances	Buy 3216 allowances: no SCR on Wabsh River 6 and Cayuga 2 & no SNCR on Wabash River 1,3	sell 142 allowances	sell 188 allowances	sell 10 allowances	sell 101allowances	buy 498 allowances	sell 22 allowances	No SCR on unit 3 and buy 1100 allowances	
allowances to sell	175	0	142	188	10	101	0	22	0	638
allowances to buy	0	3,216	0	0	0	0	498	0	1,100	4,814
Net revenue @$2500/allowance from selling allowances (million$)	0.44	0.00	0.36	0.47	0.03	0.25	0.00	0.06	0.00	1.60
Total cost to buy allowances @2,800/allowance (million$)	0.00	9.00	0.00	0.00	0.00	0.00	1.39	0.00	3.08	13.48

Table 1:EGU NOX Control Costs

Revised control strategy:	SCR on U4, MB2, MB1: SNCR on U1, U3: sell 175 allowances: income$2500/allowance	SCR &combustion optimization on Cayuga unit 1; Gibson units 1,2,3,4,5: SNCR and combustion optimization on Gallaghar units1, 2,3,4; Wabash River units 2, 4 and 5. Buy 3216 allowances @$2,800 per allowance	hi-perf SCR on Merom units 1SG1 &2SG1; combustion modification on Ratts units 1SG1 and 2SG1. sell 142 allowancews: income2500/allowance	SCR on Petersburg units 2,3,4; Stout unit 70: SNCR on Petersburg unit 1: sell 188 allowances: income $2500/allowance	85% SCR on all units: sell 10 allowances: income 2500/allowance	SCR on Bailly 7,8, Michigan City 12; Schahfer 14, 17, 18: SNCR on Mitchell 6,11, Schahfer 15. Sell 101 allowances: income $2500/ton	buy 498 allowances @$2,800 per allowance	SCR on Warrick 67054, Culley 10123, Brown 61371, 61372: sell 22 allowances: income @2500/allowance	SCR on units 4 and buy 1100 allowances	
SCR	3	6	2	4	6	6		4	1	32
SNCR	2	7		1		3				13
Total capital cost (million$)	307	368	82	210	116	208	0	111	38	1,439
Total ozone season cost (million $)	66.66	73.98	12.25	33.54	21.58	32.26	1.39	17.30	8.93	267.88
Emissions reductions achieved	20255	27841	6464	12681	17221	16410	498	8200	3849	113419
Cost effectiveness ($/ton)	3,291	2,657	1,894	2,645	1,253	1,966	2,800	2,109	2,320	2,362
Scenario #3: Emissions trading among utilities and non-EGUs in Indiana. Emissions trading across the NOX SIP Call region and emissions banking to start from the start of the program (3% reduction in costs).Baseline emission rates and heat inputs-----utilities data: SCR eff.---(80%) : SNCR eff.---- (30%): SCR & SNCR costs based on input from utilities and published data.										
Emission reductions achieved (tons)	20255	27841	6464	12681	17221	16410	498	8200	3849	113419
Cost reduction factor (3%)	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	
Total capital cost (million$)	297	357	79	203	113	201	0	107	37	1,396
Total ozone season cost (million $)	64.66	71.77	11.88	32.53	20.93	31.29	1.35	16.78	8.66	259.85
Cost effectiveness ($/ton)	3,192	2,578	1,838	2,566	1,215	1,907	2,716	2,046	2,250	2,291
Note: Indiana Municipal Power Agency's units are not expected to require additional controls to meet the proposed emission limit, therefore, this utility is not included in these cost estimates.										